

Field Hospital Strategies following the Abruzzo Earthquake, 2009

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Introduction: On 06 April 2009, an earthquake measuring 6.3 on the Richter Scale struck a large area of the Abruzzo region in central Italy. An initial assessment suggested many people were injured and many buildings were destroyed, including the main hospital of the area, the San Salvatore Hospital.

Methods: The National Civil Protection immediately sent the field hospital (FH) of the Marche Regional Government, the neighboring region, to the Abruzzo region. The non-governmental organization Regional Association Sanitary Emergencies (ARES) also sent personnel. The ARES professional volunteers included doctors and nurses who had knowledge of disasters and specific medical specializations.

International literature suggests that a FH is a complex structure that often requires a long period of time to become completely functional—time that the affected population often does not have.

Results: The proximity of the affected area to the Marche region, the logistic organization of the FH and the medical staff of ARES helped ensure that the FH was fully operational 22 hours after the earthquake. The FH had a 60-bed capacity, a field surgery theatre, ultrasonography, radiological devices, and different code areas.

From 06 April to 06 June, the FH provided medical treatment to almost 6,000 patients, and the ARES personnel (167) were backed by the sanitary personnel of the San Salvatore Hospital.

Conclusions: A well-planned medical response is important when providing health assistance during a disaster, yet it is hard to substitute a damaged hospital in the heart of the disaster area. A modular sanitary structure, light at the beginning, with specific and restricted medical supplies, with a small number of specialists in disaster medicine and disaster logistics could help improve the positive results obtained in the L'Aquila Abruzzo mission.

Keywords: Abruzzo Earthquake; disasters; earthquakes; field hospitals; Italy

Prehosp Disaster Med

Mental Health

5,600 Emergency Department Admissions and Early Intervention for Post-Traumatic Stress Disorder: What Works, When, and Why

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Introduction: Post-traumatic stress disorder (PTSD) can be a chronic and disabling disorder for a significant percentage of trauma survivors, particularly following mass-

casualty incidents. Few studies have examined the use of outreach and uptake of early interventions in the recently traumatized, and their ability to prevent the development of chronic PTSD.

Methods: This study examined the development of PTSD symptoms in a large (>5,500) cohort of very recently traumatized patients coming to an emergency department. Patients were assessed via telephone at two weeks, seven and 14 months, and by clinical interviews at three weeks and two months. Symptomatic patients (n = 296) entered a randomized, equipoise stratified, controlled trial that compared different early interventions: Exposure Based Treatment (EBT), Cognitive Therapy (CT), an SSRI, Placebo (PBO), and Waitlist control. All treatments began within a month of the traumatic event. If necessary, the waitlist control group was offered EBT at three months post-trauma. The SSRI/PBO condition was double blind. Clinical and telephone assessors were blind to treatment allocation, acceptance or completion. All subjects were followed up to 14 months post-trauma.

Results: Exposure Basic Training and CT had a greater effect on reducing PTSD incidence compared with WL, SSRI and PBO (at three months: 21.4% and 18.2% vs. 57.3%, 61.9% and 58.8%, $p = 0.002$). Preliminary analyses indicate that CT and EBT differed in certain specific areas: patients were more likely to drop out of EBT; CT had a greater effect on the depression scores.

Conclusions: Both CT and EBT are effective early interventions for CBT, but have slightly different effects. Outreach for patients arriving at an emergency department following a traumatic event is feasible. Clinical assessment and treatment uptake was relatively low, and further work is necessary to reduce barriers to treatment.

Keywords: admission; emergency department; intervention; post-traumatic stress disorder; psychosocial

Prehosp Disaster Med

Comparison of Psychiatric Symptoms among Hospital Personnel between the Second Lebanon War and the Israel-Gaza Armed Conflict

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Objectives: The study goal was to assess psychiatric symptoms among hospital personnel during the Israel-Gaza armed conflict in comparison to hospital personnel during the 2nd Lebanon War. To the best of the authors' knowledge, this is the first study comparing hospital personnel who were under the same threat (rockets) and exposed to wounded soldiers and civilians.

Methods: One hundred fifty-three hospital personnel participated in the study and completed a demographic questionnaire, along with a battery of self-reported measures for psychiatric symptoms such as the Impact of Event Scale-Revised (IES-R) and Center for Epidemiologic Studies Depression (CES-D).

Results: The results revealed that hospital personnel during the Israel-Gaza armed conflict did not differ in stress symptoms as measured by the IES-R ($t = 0.105, p = 0.916$), and depressive symptoms as measured by the (CES-D) ($t = -0.588, p = 0.557$) from hospital personnel during the second Lebanese war. Further analysis using multivariate analysis of covariance (MANCOVA), showed a significant effect of gender: women had higher stress scores than men as measured by the IES-R ($F_{1,144} = 5.677, p < 0.05$)—and profession: physicians had lower stress scores than nurses as measured by the IES-R ($F_{1,144} = 6.868, p = 0.01$).

Conclusions: Exposure of hospital personnel to different armed conflicts revealed a similar pattern as showed in this study. The main implication for this study in clinical terms is preparing an intervention to women and nurses who are more vulnerable during war time. Other explanations also are discussed.

Keywords: Center for Epidemiologic Studies Depression; Gaza; Impact of Event Scale-Revised; Israel; psychiatric symptoms; Second Lebanon War

Prehosp Disaster Med

Psychological Interventions among On-Board Mechanics on Rescue Helicopters

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Background: On-board mechanics are a group of professionals who staff the helicopter in order to provide solutions to technical problems. They are trained during their military service. In combat, they are a part of the professional helicopter team, and are exposed to the same dangers as the rest of the air crew.

Alongside their professional work, they are asked to participate in medical rescue missions and assist in evacuating casualties from the field. This activity exposes them to extremely difficult images. This, along with the existing work load and exposure to injury and death, and reinforces the sense of pressure and its undesired derivatives.

So far, little attention has been paid to the effects of this exposure on the technicians. Professionals who do not have medical training or background who are presented with situation when they are injury and death requires preparation.

Objective: The goal of this study was to examine psychological aspects of the onboard mechanic's work during emergencies to observe their exposures to injury and death without coping skills in order to assess the need of preventive intervention.

Methods: On-board mechanics who participated in the Second Lebanon War were asked to fill out a survey. The survey was distributed five months after the war and completed by 24 on-board mechanics.

Results: Mechanics are exposed to growing pressures during combat. Seventy-five percent reported being very stressed during routine activities, 96% were extremely stressed during combat. A total of 65% found themselves surprised by the tensions of war. Only 42% think that they have the coping skills for this type of pressure.

Discussion: On-board technicians are exposed to a great amount of stress during combat, due to their work loads,

personal risk, and exposure to difficult images. To cope with the problem, it was decided to create stress inoculation program as part of their training. The program will be led by the commanders. The program is in application stages.

Keywords: intervention; helicopter; psychology

Prehosp Disaster Med

Mental Health Trauma Center Integrated with a Primary Care Clinic

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Since 2001, Sderot, Israel has been the target of hundreds of "Quassam" missiles launched from the Palestinian Authority. Considering the prolonged exposure to repeated traumatic events, a high rate of mental health morbidity is expected.

The victims had difficulties attending mental health services because of a lack of awareness, the shame of stigma, and a scarcity of mental health services. The primary healthcare system in Israel is highly accessible, available to the public, and does not carry the stigma that mental health does. Therefore, it is a prime candidate for offering mental health assistance in times of disaster.

"Maccabi" health services in collaboration with the "Hosen" Center for Trauma and Disaster collaborated to establish a trauma center integrated in a primary care clinic in Sderot.

The theoretical background, the process of training professionals, the model of work, and its outcomes will be presented.

Keywords: Israel; mental health services; primary care clinic; public health; stigma

Prehosp Disaster Med

A Multimedia, Interactive Method for Neutralizing Post-Traumatic Stress Disorder Effects

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Recent research shows that emotional memories of traumatic experience are both recorded and retrieved on-line due to the "co-activation" of the amygdala—the region of the brain responsible for processing emotional memories and the hippocampus, the main memory-processing center. Emotional cues in people with post-traumatic stress disorder (PTSD) often trigger recall of the event, which then would loop back to re-experiencing of the emotion of the event. And vice versa, remembering the event or some of its auditory-visual reminders may trigger the emotional reaction associated with the event, which in turn, could trigger more intense recall, in a continuous loop. Moreover, unpleasant emotional memories are resistant to intentional forgetting: the greater intent to forget unpleasant events, the more intensive the reaction becomes. So, healing painful memories often is time and emotion consuming. The discovery that the deepest memories crucial to surviving are recorded as mental snapshots taken during times of high emotional impact or involvement, go in hand with the sensory experience analysis of people with PTSD. Studies suggest that when a memory is retrieved, it can be re-encod-